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News story

Increase in hepatitis (liver inflammation) cases in children under investigation

Regular UKHSA updates on the ongoing investigation into higher than usual rates of liver inflammation (hepatitis) in children across the UK.

From: UK Health Security Agency
Published 6 April 2022
Last updated 20 May 2022 — See all updates

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Latest

The UK Heath Security Agency (UKHSA) has published its third detailed technical briefing on the UK-wide investigations into a rise in cases of sudden onset hepatitis in children, updating data and findings on cases resident in the UK up to 16 May 2022.

Since the last update on 6 May, investigations have identified a further 34 confirmed cases, bringing the total number of UK cases to 197 as of 16 May. Of the cases to date, 11 have received a liver transplant. No cases resident in the UK have died.

The investigation continues to suggest an association with adenovirus. Adenovirus is the most frequently detected virus in samples tested.

Amongst 197 UK cases, 170 have been tested for adenovirus of which 116 had adenovirus detected. In 31 cases where adenovirus was not detected, 13 had not had whole blood sample testing, and therefore it is not possible to definitively rule out adenovirus in these cases.

So far, SARS-CoV-2 has been detected in 15% of UK patients with available results, reflecting testing on or around the time of admission.

There is no evidence of any link to the coronavirus (COVID-19) vaccine. The majority of cases are under 5 years old and too young to have received the vaccine.

Following further investigation, there is no evidence linking dog ownership and cases of hepatitis in children.

Standard hygiene measures, including covering your nose and mouth when you cough and sneeze, thorough handwashing and making sure children wash their hands properly are vital in reducing the spread of many common infections, including adenovirus.

Jaundice and vomiting are the most common symptoms experienced by the children affected.

Dr Renu Bindra, Senior Medical Advisor at UKHSA, said:

> “ It’s important that parents know the likelihood of their child developing hepatitis is extremely low. However, we continue to remind everyone to be alert to the signs of hepatitis – particularly jaundice, look for a yellow tinge in the whites of the eyes – and contact your doctor if you are concerned.
>
> “ Our investigations continue to suggest that there is an association with adenovirus infection, but investigations continue to unpick the exact reason for the rise in cases.”

Previous

Thursday 12 May 2022

The UK Health Security Agency (UKHSA), working with Public Health Scotland, Public Health Wales and the Public Health Agency, are continuing to investigate cases of sudden onset hepatitis in children aged 10 and under that have been identified since January 2022.

The usual viruses that cause infectious hepatitis (hepatitis A to E) have not been detected. The cases are predominantly in children under 5 years old who showed initial symptoms of gastroenteritis illness (diarrhoea and nausea) followed by the onset of jaundice.

Active case finding investigations have identified a further 13 confirmed cases since the last update on 6 May, bringing the total number of cases in the UK to 176, as of 10 May. Of the confirmed cases, 128 are resident in England, 26 are in Scotland, 13 are in Wales and 9 are in Northern Ireland. No children have died. As part of the investigation, a small number of children over the age of 10 are also being investigated.

UKHSA continues to investigate possible causes and will regularly publish technical updates. The investigation continues to suggest an association with adenovirus. Adenovirus is the most frequently detected virus in samples tested and a formal epidemiological study is continuing. Research studies of the immune system are also being undertaken to determine if changes in susceptibility or the effect of prior or concurrent infections could be contributing factors.

Normal hygiene measures, including thorough handwashing and making sure children wash their hands properly, help to reduce the spread of many common infections, including adenovirus.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> “ It’s important that parents know the likelihood of their child developing hepatitis is extremely low. We continue to remind everyone to be alert to the signs of hepatitis – particularly jaundice, look for a yellow tinge in the whites of the eyes – and contact your doctor if you are concerned.
>
> “ Our investigations continue to suggest that there is an association with adenovirus and our studies are now testing this association rigorously.
>
> “ We are working closely with the NHS and academic partners to actively investigate the role of other contributors, including prior SARS-CoV-2 and other infections.”

Friday 6 May 2022

The UK Heath Security Agency (UKHSA) has published its second detailed technical briefing on the UK-wide investigations into a rise in cases of sudden onset hepatitis in children, updating data and findings on cases resident in the UK up to 3 May 2022.

Since the last update on 29 April, active case finding investigations have identified a further 18 confirmed cases, bringing the total number of UK cases to 163 as of 3 May. Of these children, 11 have received a liver transplant. None have died.

Jaundice and vomiting are the most common symptoms experienced by the children affected.

The investigation continues to suggest an association with adenovirus. Adenovirus is the most frequently detected virus in samples tested.

However, as it is not common to see hepatitis following adenovirus infection in previously well children, investigations are continuing into other factors which may be contributing. These include previous SARS-CoV-2 or another infection, a change in susceptibility possibly due to reduced exposure during the pandemic, or a change in the adenovirus genome itself.

These possibilities are being tested rapidly. The association with adenovirus is undergoing a formal epidemiological study.

Research studies of the immune system are being undertaken to determine if changes in susceptibility or the effect of prior infections could be contributing factors.

There is no evidence of any link to the coronavirus (COVID-19) vaccine. The majority of cases are under 5 years old, and are too young to have received the vaccine.

Normal hygiene measures, including thorough handwashing and making sure children wash their hands properly, help to reduce the spread of many common infections, including adenovirus.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> “ It’s important that parents know the likelihood of their child developing hepatitis is extremely low. However, we continue to remind everyone to be alert to the signs of hepatitis – particularly jaundice, look for a yellow tinge in the whites of the eyes – and contact your doctor if you are concerned.
>
> “ Our investigations continue to suggest that there is an association with adenovirus and our studies are now testing this association rigorously.
>
> “ We are also investigating other contributors, including prior SARS-CoV-2, and are working closely with the NHS and academic partners to understand the mechanism of liver injury in affected children.”

Friday 29 April 2022

The UK Health Security Agency (UKHSA), working with Public Health Scotland, Public Health Wales and the Public Health Agency, are continuing to investigate the cases of sudden onset hepatitis in children aged 10 and under that have been identified since January 2022.

The usual viruses that cause infectious hepatitis (hepatitis A to E) have not been detected. The cases are predominantly in children under 5 years old who showed initial symptoms of gastroenteritis illness (diarrhoea and nausea) followed by the onset of jaundice.

Active case finding investigations have identified a further 34 confirmed cases since the last update on 25 April, bringing the total number of cases to 145. Of the confirmed cases, 108 are resident in England, 17 are in Scotland, 11 are in Wales and 9 are in Northern Ireland.

Of these cases, 10 children have received a liver transplant. No children have died. As part of the investigation, a small number of children over the age of 10 are also being investigated.

Findings continue to suggest that the rise in sudden onset hepatitis in children may be linked to adenovirus infection, but other causes are still being actively investigated.

As it is not typical to see this pattern of symptoms from adenovirus, we are investigating other possible contributing factors, such as another infection – including coronavirus (COVID-19) – or an environmental cause.

We are also exploring whether increased susceptibility due to reduced exposure during the COVID-19 pandemic could be playing a role, or if there has been a change in the genome of the adenovirus.

UKHSA is working with scientists and clinicians across the country to answer these questions as quickly as possible.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> “ We know that this may be a concerning time for parents of young children. The likelihood of your child developing hepatitis is extremely low. However, we continue to remind parents to be alert to the signs of hepatitis – particularly jaundice, which is easiest to spot as a yellow tinge in the whites of the eyes – and contact your doctor if you are concerned.
>
> “ Normal hygiene measures, including thorough handwashing and making sure children wash their hands properly, help to reduce the spread of many common infections.
>
> “ As always, children experiencing symptoms such as vomiting and diarrhoea should stay at home and not return to school or nursery until 48 hours after the symptoms have stopped.”

Monday 25 April 2022

Today, the UK Heath Security Agency (UKHSA) published a detailed technical briefing on the investigations into a rise in cases of sudden onset hepatitis (liver inflammation) in children, with data and findings on cases resident in England, up to 20 April 2022.

UKHSA, working with Public Health Scotland, Public Health Wales and the Public Health Agency, are continuing to investigate the cases in children aged 10 and under that have occurred since January 2022. The usual viruses that cause infectious hepatitis (hepatitis A to E) have not been detected. The cases are predominantly in children under 5 years old who showed initial symptoms of gastroenteritis illness (diarrhoea and nausea) followed by the onset of jaundice.

Active case finding investigations have identified a further 3 confirmed cases since the last update on 21 April, bringing the total number of cases to 111. Of the confirmed cases, 81 are resident in England, 14 are in Scotland, 11 are in Wales and 5 are in Northern Ireland.

Of these cases, 10 children have received a liver transplant. No UK cases have died. A small number of children over the age of 10 are being investigated.

There is no link to the coronavirus (COVID-19) vaccine. None of the currently confirmed cases in under 10 year olds in the UK is known to have been vaccinated.

Information gathered through the investigations increasingly suggests that the rise in severe cases of hepatitis may be linked to adenovirus infection but other causes are still being actively investigated. Adenovirus was the most common pathogen detected in 40 of 53 (75%) confirmed cases tested. Sixteen per cent of cases were positive for SARS-CoV-2 at admission between January and April but there was a high background rate of COVID-19 during the investigation period, so this is not unexpected.

Routine NHS and laboratory data show that common viruses circulating in children are currently higher than in previous years and there is a marked increase of adenovirus, particular in the 1 to 4 age group.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> “ Information gathered through our investigations increasingly suggests that this rise in sudden onset hepatitis in children is linked to adenovirus infection. However, we are thoroughly investigating other potential causes.
>
> “ Parents and guardians should be alert to the signs of hepatitis (including jaundice) and to contact a healthcare professional if they are concerned. Normal hygiene measures such as thorough handwashing (including supervising children) and good thorough respiratory hygiene, help to reduce the spread of many common infections, including adenovirus.
>
> “ Children experiencing symptoms of a gastrointestinal infection including vomiting and diarrhoea should stay at home and not return to school or nursery until 48 hours after the symptoms have stopped.”

We are working with partners to further investigate the link between adenovirus and these cases.

Hepatitis symptoms include:

- yellowing of the white part of the eyes or skin (jaundice)
- dark urine
- pale, grey-coloured faeces (poo)
- itchy skin
- muscle and joint pain
- a high temperature
- feeling and being sick
- feeling unusually tired all the time
- loss of appetite
- tummy pain

Thursday 21 April 2022

The UK Health Security Agency (UKHSA), Public Health Scotland, Public Health Wales and the Public Health Agency are continuing to investigate a rise in cases of sudden onset hepatitis (liver inflammation) in children aged 10 and under since January 2022, where the usual viruses that cause infectious hepatitis (hepatitis A to E) have not been detected.

Our active case finding investigations have identified a further 34 cases since our last update, bringing the total number of cases to 108. All the children affected presented to health services between January 2022 and 12 April 2022.

Of the confirmed cases, 79 are in England, 14 are in Scotland and the remainder are in Wales and Northern Ireland.

Of these cases, 8 children have received a liver transplant.

There is no link to the coronavirus (COVID-19) vaccine. None of the currently confirmed cases in the UK is known to have been vaccinated.

The investigation, including information from patient samples and surveillance systems, continues to point towards a link to adenovirus infection. Seventy-seven per cent of cases tested were positive for adenovirus. However, as it is not usual to see this pattern of disease from adenovirus, we are actively investigating other possible contributing factors, such as another infection (including COVID-19) or an environmental cause.

We are also investigating whether there has been a change in the genome of the adenovirus. UKHSA is working with scientists and clinicians across the country to answer these questions as quickly as possible.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> “ We are working with the NHS and public health colleagues in Scotland, Wales and Northern Ireland to swiftly investigate a wide range of possible factors which may be causing children to be admitted to hospital with liver inflammation known as hepatitis.
>
> “ Information gathered through our investigations increasingly suggests that this is linked to adenovirus infection. However, we are thoroughly investigating other potential causes.
>
> “ Normal hygiene measures such as thorough handwashing (including supervising children) and good thorough respiratory hygiene, help to reduce the spread of many common infections, including adenovirus.
>
> “ We are also calling on parents and guardians, to be alert to the signs of hepatitis (including jaundice) and to contact a healthcare professional if they are concerned.”

Tuesday 12 April 2022

Public health doctors and scientists at the UK’s public health agencies are continuing to investigate 74 cases of hepatitis (liver inflammation) in children since January 2022, where the usual viruses that cause infectious hepatitis (hepatitis A to E) have not been detected.

Of the confirmed cases, 49 are in England, 13 are in Scotland and the remainder are in Wales and Northern Ireland.

One of a number of potential causes under investigation is that a group of viruses called adenoviruses may be causing the illnesses. However, other possible causes are also being actively investigated, including coronavirus (COVID-19), other infections or environmental causes.

There is no link to the COVID-19 vaccine. None of the currently confirmed cases in the UK has been vaccinated.

Adenoviruses are a family of common viruses that usually cause a range of mild illnesses and most people recover without complications. They can cause a range of symptoms, including colds, vomiting and diarrhoea. While they don’t typically cause hepatitis, it is a known rare complication of the virus.

Adenoviruses are commonly passed from person to person and by touching contaminated surfaces, as well as through the respiratory route.

The most effective way to minimise the spread of adenoviruses is to practice good hand and respiratory hygiene and supervise thorough handwashing in younger children.

Dr Meera Chand, Director of Clinical and Emerging Infections at UKHSA, said:

> “ We are working swiftly with the NHS and public health colleagues in Scotland, Wales and Northern Ireland to investigate a wide range of possible factors which may be causing children to be admitted to hospital with liver inflammation known as hepatitis.
>
> “ One of the possible causes that we are investigating is that this is linked to adenovirus infection. However, we are thoroughly investigating other potential causes.
>
> “ Normal hygiene measures such as good handwashing – including supervising children – and respiratory hygiene, help to reduce the spread of many of the infections that we are investigating.
>
> “ We are also calling on parents and guardians, to be alert to the signs of hepatitis – including jaundice – and to contact a healthcare professional if they are concerned.”

UKHSA, working with partners, will continue to make the public aware of findings throughout the course of the investigation.

Wednesday 6 April 2022

Hepatitis is a condition that affects the liver and may occur for a number of reasons, including several viral infections common in children. However, in the cases under investigation the common viruses that cause hepatitis have not been detected.

UKHSA is working swiftly with the NHS and public health colleagues across the UK to investigate the potential cause. In England, there are approximately 60 cases under investigation in children under 10.

Dr Meera Chand, Director of Clinical and Emerging Infections, said:

> “ Investigations for a wide range of potential causes are underway, including any possible links to infectious diseases.
>
> “ We are working with partners to raise awareness among healthcare professionals, so that any further children who may be affected can be identified early and the appropriate tests carried out. This will also help us to build a better picture of what may be causing the cases.
>
> “ We are also reminding parents to be aware of the symptoms of jaundice – including skin with a yellow tinge which is most easily seen in the whites of the eyes – and to contact a healthcare professional if they have concerns.”

Hepatitis symptoms include:

- dark urine
- pale, grey-coloured poo
- itchy skin
- yellowing of the eyes and skin (jaundice)
- muscle and joint pain
- a high temperature
- feeling and being sick
- feeling unusually tired all the time
- loss of appetite
- tummy pain

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Published 6 April 2022
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